DOCUMENTED BRIEFING

RAND

Managing Quadrennial Defense Review Integration

An Overview

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National Security Research Division

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Defense Review Integration*

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*Prepared for the
Joint Staff*

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PREFACE

This documented briefing summarizes analysis performed for the Joint Staff in preparation for the second Quadrennial Defense Review (QDR), during the period from the spring of 1999 through the summer of 2000. It is intended to help the Joint Staff leadership prepare for QDR 2001 by building on previous RAND research into the lessons learned from QDR 1997. The focus is how to manage the analysis of complex "cross-cutting" issues to ensure that senior decisionmakers know the strengths and weaknesses of arguments surrounding difficult policy and resource issues.

The research will be of interest to the Joint Staff, the military services, and the Office of the Secretary of Defense (OSD), as well as other professionals interested in defense management processes.

This research was conducted for the Director for Force Structure, Resources, and Assessment (J-8) within the International Security and Defense Policy Center of RAND's National Defense Research Institute, a federally funded research and development center sponsored by the OSD, the Joint Staff, the Unified Commands, and the defense agencies.

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ACKNOWLEDGMENTS

Purpose

- **Identify perspectives on issues for QDR 2001**
  - Develop a framework for relating issues
  - Link required supporting analyses
- **Examine alternatives for Joint Staff QDR integration**
- **Propose an assessment framework for QDR issues**

INTRODUCTION

This paper was prepared to present an approach to managing Joint Staff preparations for the upcoming Quadrennial Defense Review (QDR 2001), which we developed in working with the staff of the Studies and Analysis Management Division (SAMD) of the Joint Staff (J-8). The lessons learned from the 1997 Quadrennial Defense Review (QDR 1997) included the need for leadership guidance and integration of analytic activities to sort through the myriad issues that are always confronting the Department of Defense.[1]

The "Goldwater-Nichols" legislative changes to Title X statutes[2] expanded the role of the Chairman of the Joint Chiefs of Staff (CJCS) and tasked him with the formal responsibilities of reviewing and commenting on defense matters that require analytic support as well as military judgment. The J-8 should assist the Chairman by managing a process that can provide credible and timely analysis to support high-level review of important issues.

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[1] See Schrader et al., *Quadrennial Defense Review (QDR) Analysis*, p. 53, for a discussion of planning considerations for the next QDR.

[2] Goldwater-Nichols Department of Defense Reorganization Act of 1986, PL 99-433, 1 October 1986.

Congress has mandated that another QDR be conducted in 2001,[3] and the Joint Staff has implemented a structure to develop information for the Chairman. The purpose of this research is to help the J-8 guide the QDR activities and monitor the progress of QDR panels and other processes to provide the best possible support for the Chairman in addressing complex issues. It is clear that analytic resources are limited, so only the most important issues—as defined by the Joint Chiefs, rather than by functional or system advocates—should be addressed. Such a delicate task requires an understanding of the various constituencies, in particular individual service concerns. It also requires an understanding of what is possible and knowledge of the quality of analysis being used to support alternatives.

The Joint Staff QDR activity was based on explicit recognition that the Secretary of Defense was charged with conducting the QDR (in consultation with the Chairman) and that his staff (OSD) would manage the QDR activities. Nevertheless, the Chairman has specific additional responsibility to submit to the Secretary of Defense an assessment of the review, including an assessment of risk, and he also has the implied responsibility to provide military advice throughout the process.

The Joint Staff QDR objectives were as follows:

Develop a QDR process that will shape defense policies;

Ensure that the process is strategy-based, not budget-based;

Define a force structure responsive to the national military strategy…including plans for modernization, infrastructure, and resources; and

Build the future force without breaking the current force.[4]

The Joint Staff approach was established in Joint Staff Notice 5640 of 23 February 2000, entitled *Joint Staff Quadrennial Defense Review Policy, Organization, and Process*. It defined a "Preparation Phase" with two objectives: enable the Chairman to provide QDR advice to the incoming Secretary of Defense and prepare the Joint Staff to support OSD during the "Execute Phase." The clear intent of the initial work was to focus on defining methodologies and developing options for the leadership without appearing to usurp any of the prerogatives of OSD or the new administration. This presented a dilemma that this research

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[3] National Defense Authorization Act for Fiscal Year 2000, Sec. 901, § 118 Quadrennial Defense Review, 5 October 1999.

[4] "Quadrennial Defense Review (QDR) Joint Staff Road Ahead" briefing for JS QDR Preparation Group Planning Meeting, 2 March 2000.

was intended to mitigate: "How to prepare for the QDR without getting out in front of the political leadership?" A related problem is providing responsive alternatives for consideration by the civilian leadership when many alternatives would adversely affect the plans of one or more services.

This briefing summarizes investigations of three aspects of dealing with potential QDR issues: (1) alternative perspectives on which issues are relevant, (2) managing Joint Staff QDR integration, and (3) how to develop a framework to address the congressional requirement for assessing "political, strategic, and military risk." It is intended to provide a desktop reference for the leaders of the Joint Staff QDR preparation activities. At the highest level it suggests a framework to foster a debate on important issues. For the leaders of the QDR analysis teams, it is intended to help ensure completeness and focus for panel activities. For panel members, it is intended to build an understanding of interdependence among issues.

QUESTIONS AND ISSUES

Some viewed the last QDR as a success because there were no major changes in the path that the services had chosen to follow, but those who were looking for a major transformation in defense capabilities promised by the so-called "Revolution in Military Affairs" viewed QDR 1997 as a failure. We believe the reality is that there were no effective forces (inside the Pentagon or outside in Congress or the White House) pushing for a change in the status quo. There was great uncertainty about the affect of operations other than war (OOTW) or smaller-scale contingencies (SSCs) on readiness and retention, no imminent threat from a major competitor, and a balanced-budget agreement that limited incursions into defense resources to pay for domestic programs. The environment has not changed much as we approach QDR 2001.

During the course of the last QDR, the Chairman asserted that military force structure was "about right." This judgment was informed in part by QDR analysis of the high tempo of current operations, which was keeping the existing force very busy. Prior to the start of QDR 1997, there were concerns that budget pressures might require the downsizing of force structure to pay for necessary modernization. The sustained, robust economy and congressional agreement on a balanced budget limited pressure to reduce defense expenditures and essentially

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eliminated outside pressures for major changes. No serious new military competitors have arisen, troops are still heavily engaged in a variety of operations short of war, and the economy continues to grow. As a result, it is likely that the judgments of the last QDR will stand, and major changes in policy and force structure are unlikely. Yet, the past is not always a predictor of the future. There are many things that could rock the boat. The term "strategic event" seems to capture those activities or circumstances that might radically change internal and external perspectives. The analysis leading up to the QDR cannot know which, if any, possible strategic events will shape the policies of the next administration. Nevertheless, the effect of alternative futures can be assessed in terms of how they might change requirements for military capabilities.

A short list of possible strategic events to consider, in building QDR alternatives and their likely consequences, includes:

1. Accelerated fielding of weapons of mass destruction (WMD) and long-range delivery capabilities, including chemical and/or biological warfare payloads, by "nations of concern." Iraqi and North Korean research activities and speculation on their potential cause concern about future military operations, but responses are measured at present. Once new capabilities are fielded, delay in response will not be acceptable—even if we have no good answers. The result would be a requirement to develop and field theater and national missile defense systems much more rapidly.

2. Collapse of the Democratic People's Republic of Korea (DPRK), or substantial progress toward reconciliation or reunification. The result of either event would be an expectation that force structure could be greatly reduced, since half of the two major theater war (MTW) threat would have disappeared.

3. Broad desire to resolve the mismatch between a wide-ranging defense strategy and the limited resources available for defense programs. At present, a small minority of defense experts is concerned that our strategy ("Shape, Respond, Prepare") requires major increases ($10 billion to $25 billion per year) to meet current readiness and transformation requirements.[5] Should there arise a more general agreement that this is a problem that must be addressed, this issue would become a strategic event. Such a finding would mean hard choices with inevitable "winners" and "losers"

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[5] See Gouré and Ranney, *Averting the Defense Train Wreck in the New Millennium*.

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among the services. The result would be a need either to greatly increase defense spending or to significantly reduce force structure and modernization.

4. Inability to access or retain adequate military manpower. There was an emerging understanding during the last QDR that the high pace of current operations and the increasing discontent with housing conditions, medical care, and pay were affecting the numbers of new recruits and reenlistments. Congress has responded to some of these concerns, but the problem could become a strategic event if planned improvements are not effective. The result would be the need to adjust military strategy either to limit operations to permit a more acceptable pace of operations for the force or to increase pay and allowances significantly to make military service more competitive with civilian alternatives.

5. Several successful domestic terrorism acts. For now, there is concern about terrorism and debates about the appropriate role of the military vis-à-vis civil agencies and authorities. This is a low-level debate attracting little attention because WMD terrorism is not a reality. This could change, however, and the military might be ordered to play a much greater role, which would significantly affect current operating patterns. The result would be a requirement to focus military capabilities on domestic threats at the expense of forward presence to shape the international environment.

None of these potential events is likely, but they are not impossible. Defense planners should at least think through their consequences and possible reactions. For the Joint Staff QDR leadership, this means that critical assumptions need to be examined for their dependence on the status quo. If the new strategy is based on supporting two MTWs and the security environment in Korea changes radically, would the new strategy still be supportable? If pressures on the federal budget limit real-growth of defense spending to zero, how might modernization programs be restructured? The Chairman's advice to the new Secretary of Defense should be informed by an understanding of the strategic consequences of the possible changes in the national security environment.

Need for Alternative Perspectives

There is no single answer to the question, What is the right taxonomy for responding to QDR issues?
- Congressional questions need to be addressed but they are not mutually exclusive
- Joint Staff QDR Panels are necessary to manage analysis and divide labor
- Issues raised in various other forums need to be addressed

Relating perspectives can assist in integrating Joint Staff activities and reducing wasted effort
- **Perspective One - Congressional Questions**
- **Perspective Two - Cross-cutting Issues**
- **Perspective Three - ?? (may emerge with presidential campaigns)**

The next QDR, like the last one, means different things to different audiences. The focus of this analysis is to support the integration of Joint Staff QDR activities, but that can be effective only if there is an understanding of the various consumers of QDR analysis. A single organizing framework would be the easiest to manage, but it would be inadequate if important issues were not addressed. One means of conducting the QDR would be to answer the various points Congress mandates; this is what we call the "congressional questions" perspective. Congress has established a recurring requirement for a report addressing many aspects of the defense strategy, but its outline for a report does not include all of the considerations that arise in developing a strategy and thus may be too general to provide insights into contentious underlying issues. Although not exactly questions, the elements in the QDR legislation provide one necessary way to look at QDR analysis. However, there may be other perspectives that also provide insights on study management, as will be discussed later.

QDR 1997 legislation included 13 specific questions to be addressed in the QDR report. In the event, the Secretary of Defense and the Chairman chose not to substantively address revisions to the Unified Command Plan. The legislation for QDR 2001 includes one new question on the effects of technology, along with the previous questions, for a total of 14 (as shown on the next two slides). Analysis of the questions shows that several overlap, such as (1) force structure and

(5) the impact of OOTWs and SSCs on high-intensity combat and strategy, and (10) required presence and pre-positioning.

Congressional Requirements
for QDR Report

- **The report shall include the following:**

    (1) A comprehensive discussion of the national defense strategy of the United States and the force structure best suited to implement that strategy at a low-to-moderate level of risk.

    (2) The assumed or defined national security interests of the United States that inform the national defense strategy defined in the review.

    (3) The threats to the assumed or defined national security interests of the United States that were examined for the purposes of the review and the scenarios developed in the examination of those threats.

    (4) The assumptions used in the review, including assumptions relating to (a) the status of readiness of United States forces; (b) the cooperation of allies, mission-sharing, and additional benefits to and burdens on United States forces resulting from coalition operations; (c) warning times; (d) levels of engagement in operations other than war and smaller-scale contingencies and withdrawal from such operations and contingencies; and (e) the intensity, duration, and military and political end-states of conflicts and smaller-scale contingencies.

    (5) The effect on the force structure and on readiness for high-intensity combat of preparations for and participation in operations other than war and smaller-scale contingencies.

    (6) The manpower and sustainment policies required under the national defense strategy to support engagement in conflicts lasting longer than 120 days.

    (7) The anticipated roles and missions of the reserve components in the national defense strategy and the strength, capabilities, and equipment necessary to assure that the reserve components can capably discharge those roles and missions.

Congressional Requirements
for QDR Report (continued)

    (8) The appropriate ratio of combat forces to support forces (commonly referred to as the 'tooth-to-tail' ratio) under the national defense strategy, including, in particular, the appropriate number and size of headquarters units and Defense Agencies for that purpose.

    (9) The strategic and tactical air-lift, sea-lift, and ground-transportation capabilities required to support the national defense strategy.

    (10) The forward presence, pre-positioning, and other anticipatory deployments necessary under the national defense strategy for conflict deterrence and adequate military response to anticipated conflicts.

    (11) The extent to which resources must be shifted among two or more theaters under the national defense strategy in the event of conflict in such theaters.

    (12) The advisability of revisions to the Unified Command Plan as a result of the national defense strategy.

    (13) The effect on force structure of the use by the armed forces of technologies anticipated to be available for the ensuing 20 years.

    (14) Any other matter the Secretary considers appropriate.

During workshops in the autumn of 1999, the Joint Staff considered a number of organizational models focused on dealing with QDR issues in an integrated manner, but it decided that it was better to use the Joint Staff organizational structure as a basis for response. It has initially

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organized into eight panels: Strategy and Risk Assessment (SRA); Force Generation, Capability, and Structure (FGCS); Modernization (Mod); Sustainment, Mobility, and Infrastructure (SMI); Readiness (Read); Transformation, Innovation, and Joint Experimentation (TIJE); Information Superiority (IS); and Human Resources (HR). This functional breakdown is similar to the QDR 1997 structure and aligns well with existing Joint Staff directorates, for example, strategy (J-5), mobility (J-4), modernization (J-8), and joint experimentation (J-7).

Although the congressional questions perspective considers many issues required for a thorough QDR, there are other perspectives. Forums such as the National Defense Panel during QDR 1997; the current U.S. Commission on National Security/21st Century, also known as the Hart-Rudman Commission; and public debates on defense policy and programs raised other issues that might be overlooked if the QDR follows only one perspective. Thus, we recommend considering other taxonomies.
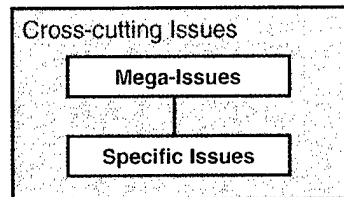
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┌─────────────────────────────────────────────────────────┐
│              A Second Perspective:                        │
│             Cross Cutting Issues                          │
│ ───────────────────────────────────────────────────────  │
│                                                           │
│     The future defense strategy will be based on          │
│     consideration of many issues raised in the last QDR,  │
│     in the public policy debate, and in both formal and   │
│     informal Pentagon reviews.  Analysis of these issues  │
│     can provide a set of cross-cutting issues that will   │
│     need to be addressed in the QDR report                │
│     Cross-cutting issues can be structured into a set of  │
│     issues that collect one or more specific issues into  │
│     logically connected groups                            │
│     Joint Staff QDR panels should review cross-cutting    │
│     issues to ensure preparedness of senior leadership    │
│                                                           │
│            ┌─────────────────────────────┐                │
│            │ Cross-cutting Issues        │                │
│            │   ┌───────────────────┐     │                │
│            │   │   Mega-Issues     │     │                │
│            │   └───────────────────┘     │                │
│            │            │                │                │
│            │   ┌───────────────────┐     │                │
│            │   │  Specific Issues  │     │                │
│            │   └───────────────────┘     │                │
│            └─────────────────────────────┘                │
│                                                           │
└─────────────────────────────────────────────────────────┘
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A second perspective concerning what issues are most relevant to the QDR arose in previous research for the Joint Staff. Examining issues from the last QDR as well as the issues raised in formal budget reviews and informal QDR preparation activities led some analysts to recognize the existence of a set of cross-cutting issues based on recurring specific strategy and programmatic issues for managing QDR analysis. These cross-cutting issues are organized into high level groups of mega-issues (focused on categories of alternatives that need to be considered) and subordinate specific issues (a preliminary list of specific issues is included in the Appendix). Neither list is static, since some issues are resolved (albeit not often and usually not for long) and new issues arise as our forces are involved in new operations or new capabilities are developed. Nevertheless, such lists are useful to ensure not only that planned analysis can respond to the most important issues but also that senior leaders can be kept informed of the range of issues.

The congressional questions and cross-cutting issues are clearly inter-related. Each perspective provides insights on the new defense strategy. (Subsequent phases of this research will investigate database tools to facilitate understanding overlaps and shortfalls between the two perspectives.) The congressional question perspective by itself is not sufficient, but it defines the framework of the required report to Congress and will be used to present most of the Joint Staff QDR analysis.

A third perspective may need to be considered as the presidential campaigns unfold. This would be associated with emerging proposals to change defense priorities. For Congress, the purpose of the QDR is to transmit the new administration's defense strategy back to the legislative branch, so issues affecting any new strategy should be examined. The new administration may have its own ideas about the role of the QDR. This third perspective may not be defined until later in the year, but at least the first two perspectives, congressional requirements and cross-cutting issues, should be considered in these early stages of preparation.

JSN 5640: Panels vs. Legislative Questions
Lead / Support

		J5 SRA	J8 FGCS	J8 Mod	J4 SSMI	J3 Read	J7 TIJE	J6 IS	J1 HR
1	Strategy	L	S				S		
	Force structure for low-to-moderate level of risk	S	L		S				
2	National Security Interests	L							
3	Threats & Scenarios	L							
4	Readiness				S	L			
	Coalition Operations	S	L		S				
	Warning Times	L							
	Levels of Engage...								
	OOTW/SSCs								
5	Effects of OOTW & SS on High-intensity Con...								
6	Policies to support conflicts > 120 days								S

Assumptions (rows grouped under 4)

> Panel Structure reflects staff organization (stovepipes)
> - May be necessary for management
> - Not adequate for cross-cutting issues
> Congressional questions must be addressed
> - May not be the best way to approach analysis

JSN 5640: Panels vs. Legislative Questions
Lead / Support

		J5 SRA	J8 FGCS	J8 Mod	J4 SSMI	J3 Read	J7 TIJE	J6 IS	J1 HR
7	RC Roles & Missions	S	L		S		S		
8	"Tooth-to-tail" Ratio; Size & Numbers of HQs, Agencies	S	S	S	L		S	S	S
9	Lift (Strategic & Tactical; air, sea, ground)				L				
10	Required Forward Presence & Prepo	L			S				
11	Intertheater Resource Shifting	S	L		S				
12	UCP Revisions	L					S		
13	Effects of Technology: Ensuing 20 years		L	S	S		S	S	
14	"Any other matter..."				*Integration Group*				

These slides by the Joint Staff QDR Preparation Group reflect the congressional question perspective where a "lead" panel has been assigned to each question (or major component). Most issues affect

more than one panel, so "supporting " panels have also been identified. It is envisioned that the lead panels will prepare the Chairman's response to each of the questions based on analysis that they will conduct in the period leading up to the development of the QDR report. Since major supporting analyses may affect the answer to more than one congressional question, it may be useful to review analysis plans from the perspective of cross-cutting issues and use the results of these analyses to inform panel responses to congressional questions. The point raised here relates to ensuring the completeness of supporting analyses, so the Chairman is prepared to provide advice to the Secretary of Defense not to reopen the question of Joint Staff QDR organization.

Emerging Mega-Issues Provide a Framework to Manage Analysis

1 - Defining strategy alternatives and understanding their implications
2 - Defining force structure alternatives that better support the strategy within resource constraints
3 - Defining overseas presence options to support emerging strategic challenges
4 - Defining postures and equipment options to support unique demands of SSCs
5 - Defining strategy and capability options to respond to asymmetric threats
6 - Defining DoD roles, responsibilities, and requirements for Homeland Defense
7 - Defining a transformation strategy for new operational concepts and organizational relationships to exploit new technologies
8 - Defining appropriate mechanisms to sustain tempo and support the strategy
9 - Adequately resourcing readiness
10 - Balancing sustainable recapitalization, transformation, and force structure
11 - Balancing modernization of platforms and weapons to provide adequate capability and stockage
12 - Maintaining nuclear deterrence and stability while deploying limited NMD
13 - Efficiently managing infrastructure to support operational readiness and quality of life

RAND's review of issues from QDR 1997, as well as the Joint Staff's Primary Horizon 99 workshop, provided the basis for a framework based on alternatives that should be developed to prepare for QDR 2001. These mega-issues are worded to emphasize the need to consider alternatives that can lead to a detailed analysis of differences among alternatives—not to provide a specific "right answer." Each mega-issue includes specific issues that may arise with minor variations in other mega-issues. The emerging mega-issues framework is intended to provide a home for any issue that arises. Strategy, force structure, and transformation still appear as focus areas, but we believe this taxonomy is more amenable to analysis and is a better way for senior leaders to consider issues. The Joint Strategy Review and the SRA panel have already started down this path by considering three alternative strategies. Developing alternatives to the current force structure will be a more difficult task because all services are protective of the force structure choices they have made and will resist considering other alternatives.

These issues contributed to the congressional perspective on defense strategy and led to the fourteen questions in the legislation. Where we start to examine issues is not as important as understanding the different perspectives and the need to make sure none of the important issues "falls through the cracks" because of inflexible or inappropriate organizational structures. At a minimum, important issues need to be referred to at least one analytic panel to ensure that alternatives are considered.

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Panels vs. Mega-Issues
Major/ Minor Linkages

	J5 SRA	J8 FGCS	J8 Mod	J4 SSMI	J3 Read	J7 TIJE	J6 IS	J1 HR
1. Military Strategy Alternatives	■	X	X		X	X		
2. Force Structure Alternatives	X	■				X		
3. Overseas Presence Alts	■	X			X			
4. SSC Support Alts		■		X				
5. Asymmetric Threat Alts	■	X	X			■	X	
6. Homeland Defense Alts	■	■				X		
7. New Operational and Organizational Alts		■	X	X		■	X	
8. Tempo Management Alts		■						X

■ Major Linkage X Minor Linkage

Mega-issue structure highlights shared responsibilities
- Lead panel may not be sufficient for cross-cutting issues

Panels vs. Mega-Issues
Major/ Minor Linkages

	J5 SRA	J8 FGCS	J8 Mod	J4 SSMI	J3 Read	J7 TIJE	J6 IS	J1 HR
9. Readiness Resourcing Alts		X			■			
10. Investment Balance Alts	■ ??(Integration Group)							
11. Weapons Mix Alternatives	■ ??(JWCA)							
12. Strategic Forces Alts	■	X	X		X			
13. Infrastructure Alts				■				

Some Mega-Issues are not directly addressed
- Process model identifies need for resource analysis
- Structure emphasizes creation and examination of alternatives

■ Major Linkage X Minor Linkage

These two slides show the linkage between the QDR panels and the mega-issues. The cross-cutting nature of the issues is apparent in considering strategy alternatives that need to be informed by new operational concepts from the TIJE panel, new capabilities from the

Modernization panel, new force structures from the FGCS panel and readiness implications of different strategies. It is still possible to have lead (or co-lead) panels for each category of mega-issue, but the taxonomy also highlights where the structure is potentially insufficient. In particular, the class of issues associated with investment balance alternatives and weapons mix alternatives may be overlooked using only the congressional question taxonomy.

As previously discussed, a third perspective could arise from issues raised during the election but it is too early to determine what those might be. After considering different approaches, therefore, the Joint Staff decided to use the legislation as the primary framework for allocating work. Nevertheless, we continue to believe that alternative perspectives need to be examined to ensure that important specific issues are not missed. Clearly, foundational work needs to be done in the areas of strategy, modernization, force structure, and readiness, and the congressional question perspective provides a basis to begin analysis. The periodic review and updating of the cross-cutting issues will require the Joint Staff QDR panels to work together as they prepare to respond to the congressional questions. There are more questions to be answered than there are resources to resolve, so analysis should continually be refocused on the most important issues, regardless of where they arise.

Reviewing QDR Analysis Plans

Congressional Questions \ Activities	JSR	DC B2K	MRS 05					
1 Strategy	✓							
1 Force structure for low-to-moderate level of risk								
2 National Security Interests	✓							
3 Threats & Scenarios	✓		JS and OSD QDR activities must be evaluated in terms of outputs A master plan linking studies, wargames, and other activities was useful in the last QDR					
4 Assumptions — Readiness	✓	P						
4 Assumptions — Coalition Operations	✓							
4 Assumptions — Warning Times	✓							
4 Assumptions — Levels of Engagement								
4 Assumptions — OOTW/SSCs	✓	✓						
5 Effects of OOTW & SSCs on High-intensity Combat	P	P						
6 Policies to support conflicts > 120 days			P					
7–14 ...								

In addition to considering the three perspectives on QDR issues, managing QDR analysis requires a comprehensive analytic plan that links activities to congressional questions. The activities should be able to provide insights on the linked questions and inform the QDR process. These include activities such as the Joint Strategy Review (JSR) and the Mobility Requirements Study '05 (MRS-05), which are not part of the formal QDR activities. There are also tailored activities, such as the Dynamic Commitment Beyond 2000 (DCB2K) wargames, focused on smaller-scale contingencies (SSCs). By mapping activities to the congressional questions as well as to the cross-cutting issues, it will be possible for the Joint Staff to keep the senior military leadership informed on progress and emerging problems as the execution phase of the QDR approaches.

The Integration Group should prepare matrices (congressional perspective, mega-issue perspective) linking planned analyses to the issues they are intended to inform. Such matrices could help those senior leaders reviewing QDR preparations to focus on the progress of analysis as well as on the process itself.

Suggested Steps to Focus Road Ahead

- **Identify one or two specific cross-cutting issues for each panel to consider in its workshops**
  - (5) How do we balance the need to shape and respond against preparing for a future that may include a regional great power or near peer?
  - (11) What new, innovative concepts and technologies impact on force structure?
  - (20) What are the high demand, low density (HD/LD) unit and individual issues?
- **Discuss examining the need for inputs (alternatives) from other panels**
  - **Strategy choices informed by new concepts that might be available**
  - **Force structure needs to know modernization alternatives**
- **Define data and/or analysis required to understand plans and required capabilities**
  - **What time frames (current, end of POM, 2020?)**
  - **How good are existing and ongoing studies?**

In summary, this discussion of perspectives provides a basis for building on the organizational and process activities that have so far taken the majority of the QDR panels' time and have been the focus of reviews by the senior leadership. In the next phase, the panels should be directed to focus on one or two specific cross-cutting issues. The issues should be selected from the most obvious, and possibly contentious, to gain an understanding of the capability of the panel structure to respond to difficult problems. This phase should lead to the structuring of the issue for discussion by senior leaders to generate feedback on those aspects of the issue that should be developed and to identify those areas where time should not be wasted.

Illustrative examples of issues to consider for the next phase of analysis: are:

(5) (from the Military Strategy Alternatives)—How do we balance the need to fund shaping (engagement) and responding to small-scale contingencies against the need to prepare for a future that may include a regional great power or near peer?

(11) (from the Force Structure Alternatives)—What new, innovative concepts and technologies will affect force structure? and

(20) (from the SSC support alternatives)—What are the high demand, low density (HD/LD) unit and individual issues?

The panels have already developed long lists of issues, and elements of the specific cross-cutting issues have already been addressed. Directed refocusing, using the lists prepared by the panels, will help to limit the demands placed on the panels during this preparation phase.[6]

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[6] The Joint Staff envisions three phases of QDR 2001: (1) an Organize phase that began in October 1999 and ran through the publication of the Joint Staff Notice in February 2000; (2) an overlapping Prepare phase that will run until January 2001; and (3) an Execute phase that will begin when elements of the new political team are in place in early 2001 and will run through the submission of the QDR report and the Chairman's risk assessment.

Observations

- **Activities have started with emphasis on organization and process**
- **Most groups are searching for focus**
- **No shortage of ideas exist, but a framework for prioritization is necessary**
- **Direction is required to ensure that work is productive and tangents are avoided**
- **Problem identification workshops are not a good use of panel time, unless there are some adjustments**

MANAGING JOINT STAFF QDR INTEGRATION

The principal function of the Studies and Analysis Management Division (SAMD) in supporting Joint Staff QDR activities is to integrate the activities of others with a common goal of preparing the Chairman to respond to issues raised in QDR. The first few months have allowed the QDR panels to meet and work together, primarily through structured workshops to identify issues. The senior leadership has examined organizational structures and a QDR process model developed by the QDR Integration Group.[7]

There is a valid concern that the Joint Staff not be perceived as "getting out in front of" the Office of the Secretary of Defense by prejudging QDR outcomes. As a result there has been an emphasis on organizational and procedural issues. However, if the emphasis is placed on understanding the implications of possible alternatives, the Joint Staff can move ahead with its analysis of substantive issues,

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[7] This process model is a diagram delineating a flow of information starting with security interests and the strategic environment, and passing sequentially through strategy, warfighting concepts, requirements, force structure, and resources. This information would then be assessed to determine if there are sufficient resources or, if not, if the risks are acceptable. The process includes a feedback loop, if risk is unacceptable, so one or more elements in the review can be changed.

without limiting the options available to the new administration. Clearly, the Chairman is concerned about readiness, and most of the QDR issues that might be examined during the preparation phase relate to readiness.

Problem-identification workshops were helpful for team building, but the lists generated should be viewed as a starting point from which a small set of cross-cutting issues can be generated. External guidance from the QDR General Officer Steering Committee (GOSC) should be used to limit panel work to analyzing the issues the senior leadership perceives as most important.

What Should Be Expected from Panels?

- **Panel Chairs and Panel Leads should develop a <u>short</u> prioritized list of specific issues likely to arise in the QDR, and their panel should be able to at least share responsibility for answering these questions**
  - **These are not just the congressional questions**
  - **There should be a short answer now (based on intuition) and a plan for developing more insights**
- **Panel activities for the near-term should focus on one or two specific issues to exercise the team without making work**
- **Emphasis should be on presenting alternatives (with supporting analysis) for senior decisionmakers**
  - **Panels should view their role as providing insights, not presenting solutions**

The QDR panel workshops conducted in the spring and early summer of 2000 by the Studies, Analysis, and Gaming Division (SAGD) applied problem identification techniques that had proved useful in reviews of individual acquisition programs. The cross-cutting nature of the issues likely to be raised in the QDR caused the panels to identify dozens of issues that identified problems and symptoms of problems, but the issues by themselves did not define a path for near-term and long-term analytic efforts.

As a next step, the panel leadership—the relevant flag officer and the lead O-6—should use the workshop results to develop a short list of no more than five specific issues,[8] in priority order, for consideration by the senior leadership. The specific issues should be sufficiently detailed to be amenable to discussion in the Joint Requirements Oversight Council (JROC) or among the joint chiefs. These would be vehicles for extracting guidance on the leadership's views of the issues and importance of alternatives to be considered.

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[8] These specific issues are not independent from the congressional questions or mega-issues. Instead, they are concrete elements of a larger issue that are more likely to be amenable to analysis. For example, in responding to the congressional question of the force structure best suited to support the defense strategy, a specific question would be "What force structure would be required to successfully conduct an MTW with transformed ground forces?"

The panel leaders, in conjunction with selected members of the panel, should develop an initial short answer to each question with a view to how the panel might gain additional insights into the issue. The tools that might be used, as well as timelines for gathering data, should be considered. Because of the previously mentioned sensitivities about Joint Staff activities, the emphasis of all discussions should be on constructing reasonable alternatives and understanding the implications of those alternatives. The role of the QDR staff is to structure information for review by the senior leadership to build their understanding of the interactions among issues and to prepare the Chairman for responding to possible readiness effects of strategy alternatives and the risk associated with possible QDR recommendations.

Emerging Problems

- **Tendency to want to wait for input from someone else**
  - Definition of risk
  - Expected resource levels
  - "Requirements" of strategy
  - Positions of candidates
- **Uncertainty about time frame to consider**
  - New capabilities may not be fielded for 10–15 years
  - Personnel problems are primarily in the short term
  - Formal service plans rarely extend beyond the Future Years Defense Program (FYDP)
- **Defense Agency reviews are problematic**
  - Could easily distract from more important analysis
  - Must be addressed to satisfy service concerns
- **Relations with OSD staff and CINCs**
  - Being inclusive is diminishing the quality of outputs
  - OSD's perception of JS activities will affect end game

Managing Joint Staff participation in the QDR process both in the preparation phase and in the execution phase will require an understanding of the internal and external dynamics of the process. One of the observations from participation in some of the panel working sessions and most of the review meetings is that there is a strong tendency to point to other sources to resolve issues. Although this is a predictable group dynamic, its effects must be minimized. Some of the answers are unknowable until after the election, but these uncertainties should not keep the panels from stating the assumptions they used in building alternatives. Higher-level review may lead to changes in assumptions, but the process will not be stalled.

A difficult issue that remains from QDR 1997 is how to deal with the problem that planned new capabilities will not enter the force for ten to fifteen years, while their costs compete with funds for current operations. This is a long-term readiness issue and increases the risk of current operations. The quality of estimates of future costs and future capabilities is more uncertain than the numbers in the formal Planning, Programming, and Budgeting System (PPBS) documents. The resolution of this dilemma will require consideration of more than a single timeframe. Exactly how this will be handled can be worked out as the analysis proceeds, but participants should be told which time period is relevant as each issue is reviewed.

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There is a widespread perception from the last QDR that the defense agencies were not scrutinized sufficiently. As a result, the services feel that a disproportionate share of the QDR reductions were borne by the services. This is a recurring theme in the GOSC and in joint chiefs review sessions, and it has resulted in special workshops to develop common metrics for assessing defense agency performance and attempts to establish expanded formal relationships for Joint Staff review of the complete set of defense agencies. These activities do not help to focus the QDR panels on analysis of more important issues that clearly fall within the expertise of the military community. Nevertheless, the service chiefs will continue to raise the issue, so its affect on other panel work must be managed and raised to the senior leadership if it becomes a problem.

Another observation from the last QDR was the problem of trying to be inclusive and its impact on the ability to generate alternatives and to keep work focused on the most important issues. Small groups are more manageable and more likely to be able to keep on track, but the perception that potentially affected parties have been excluded from participation will present problems in the endgame. The senior leadership will need to be informed throughout the QDR process of this tension and how it is being managed. The consideration of alternatives rather than the search for point solutions may be a useful device to develop growing levels of support; small groups can structure alternatives that are then presented to larger groups for debate and acceptance. This is primarily an OSD problem, since the Secretary of Defense is responsible for conducting the QDR, but it is also relevant to Joint Staff preparation activities. The Joint Staff should continue to concentrate on understanding the effect—and particularly the risk—of possible alternatives.

Since the QDR is primarily the responsibility of the Secretary of Defense, the perception of the OSD staff of how effectively the Joint Staff is dealing with difficult issues is very important. If the Joint Staff is perceived as only capable of coming up with least-common-denominator consensus solutions, the work of the Joint Staff QDR organization will be largely irrelevant. On the other hand, if the staff is perceived by the services as pursuing an agenda at cross-purposes to their interests, it will be difficult to get any work done. An acceptable outcome of this dilemma will require strong leadership in QDR integration. The Chairman has directed the process to start in an open and collaborative manner. This does not necessarily mean, however, that eventually some small groups will be empowered to look at selected issues in more innovative ways.

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+---------------------------------------------------------------+
|                                                               |
|          A Short List of Tough Questions                      |
|  _____  |
|                                                               |
|                                                               |
|   • How does the Air Force plan to support the emerging       |
|     concepts for the Army's Medium Force that will rely much  |
|     more heavily on tactical airlift? (Mega-Issue 7)          |
|   • Is the current defense strategy underfunded?              |
|     (Mega-Issue 10)                                           |
|      – Which elements are at risk?                            |
|      – What is the preferred strategy for reducing risk?      |
|      – How big is the problem?                                |
|   • What are the alternatives for eliminating HD/LD problems? |
|     (Mega-Issue 4)                                            |
|   • What are the consequences of dropping from two MTWs to    |
|     one MTW with better resourcing for SSCs? (Mega-Issue 1)   |
|   • How serious are the manpower problems and what            |
|     alternatives exist to alleviate them? (Mega-Issue 8)      |
|   • Are foundational studies (MRS-05, RCE-05, etc.) relevant  |
|     to QDR questions or are they of limited utility because   |
|     of constraints on analysis? (All issues)                  |
|                                                               |
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Rather than reviewing the long lists of issues generated in the panel workshops, we believe it is more useful to present a few tough questions, or specific issues, to stimulate discussion within the panels and among the QDR Integration Group participants. These issues are derived from reviewing not only the issues raised in the last QDR but also the ongoing program and budget reviews in the Pentagon and on Capitol Hill.

The first specific issue is a logical question, given the Army's emphasis on its internal transformation activities. The CJCS should be prepared to answer questions about the joint requirements of emerging service capabilities. The issue is cross-cutting, since both the TIJE and the modernization panels need to be involved in defining requirements to support future joint operations. It is clearly a part of Mega-Issue 7 (New Operational and Organizational Alternatives), but it is specific to modernization, force structure, and infrastructure considerations that may be overlooked in the congressional question perspective.

The second issue highlights a potential deficiency in the current Joint Staff QDR organization. Even in a strategy-based approach, there is a need to understand the costs of the demanded capabilities. If the current strategy is underfunded, how much is the difference and where are the stress points? The functionally oriented QDR panels have some capability to identify program costs, but there needs to be a robust

resource analysis capability to enforce common measures of cost and a common presentation of costs for the senior leadership. This is central to Mega-Issue 10 (Investment Balance Alternatives).

The intensive operations in monitoring Iraqi compliance with United Nations sanctions and supporting peacekeeping operations in the Balkans have led to the identification of certain units as high demand but low density (HD/LD) forces. One of the questions that Congress will ask after the QDR is, what has been done to alleviate the problems for those units? Now is the time for the senior leadership to gain an understanding of what is possible and what are the likely costs. Mega-Issue 4 (SSC Support Alternatives) addresses this specific issue.

The Bottom-Up Review at the beginning of the Clinton administration introduced the concept of the major theater war (MTW), called major regional contingencies (MRCs) at the time, as a sizing criteria for forces after the collapse of the Soviet Union. Now that the demands of contingencies smaller than MTWs are better understood, there is talk of changing the requirement for two nearly simultaneous MTWs. How would a change in strategy affect force structure? This specific issue is an example of the questions that must be addressed in Mega-Issue 1 (Military Strategy Alternatives). It is closely associated with Congressional Question 1 (Strategy and Force Structure).

The previously mentioned HD/LD issue contributes to a larger cross-cutting issue of the manpower problems reflected in recruiting shortfalls and low retention statistics. Just how serious is the manpower problem and what alternatives are available to alleviate the problems? The Human Resources panel is the first place to look for answers, but its review must be informed by an understanding of the manpower implications of strategy alternatives and the transformation of forces to support new organizations and concepts of operation. This presents alternatives to be considered in Mega-Issue 8 (Tempo Management Alternatives).

Finally, there is a cross-cutting issue more directly focused on the responsibilities of this project's sponsors. How good are the existing studies and how likely are planned studies to provide relevant and timely answers to QDR issues? If they are not what they seem, can the study efforts be redirected to be more useful? This is a slightly different issue but it is still cross-cutting since it must be considered by all panels and affects more than one mega-issue.

Illustrative Issue Review Template (1)

Specific Issues from Problem Identification Workshops

- **Which missions contribute to HD/LD problems?**
    - **What are possible solutions?**
        - Stop doing missions
        - Form new units (manpower, equipment)
        - Do things differently
    - **Plan of action**
        - Review data (4/00)
        - Identify new concepts (5/00)
        - Construct alternatives (6/00)

Nature of Problem		
Near-term (2001)	Mid-term (2007)	Long-term (2020)
■	■	

Availability of Data	Relevance of Existing Analysis	Adequacy of Existing Models
G		

Missions most seriously impacted

Engagement	Routine SSCs	Significant SSCs	First MTW	Two MTWs	Homeland Defense

Because there are too many issues, many of which are cross-cutting, the panels must consider how to monitor issue development more easily, particularly with respect to supporting analyses. At the beginning of the last QDR, the RAND team used the objectives-based planning and resource management (OBPRM) framework to relate emerging issues to operations that were affected by the capabilities associated with the issue. The late start and widening scope of QDR 1997 showed that a simpler, more graphic approach would be more useful both for review by senior officials and to focus the QDR panels on specific aspects of their issues. These two illustrative issue templates could form the basis of a standard template for presenting issue status reports to the GOSC and the joint chiefs.

The concept of these templates is simple: Capture the strategy as a spectrum of military operations, using familiar terminology. In this case, we use a scale of increasing intensity and complexity, from engagement to two MTWs; we append the homeland defense mission on the high end since in our definition it includes the strategic nuclear offensive and defensive forces as well as the response to domestic terrorism. Each issue will affect one or more broad mission categories, so those missions most seriously affected are highlighted to help place the issue in a strategic context.

Illustrative Issue Review Template (2)

Specific Issues from Problem Identification Workshops

- **What transformation alternatives affect force structure and which forces are most likely to change?**
  - What are possible alternatives?
    - Earlier counteroffensives in MTW
    - Medium forces in SSCs
    - JSTARS functions from space
  - Plan of action
    - Identify new concepts (5/00)
    - Construct alternatives (6/00)

Nature of Problem		
Near-term (2001)	Mid-term (2007)	Long-term (2020)
		■

Availability of Data	Relevance of Existing Analysis	Adequacy of Existing Models
▽		

Missions most seriously impacted

Engagement	Routine SSCs	Significant SSCs	First MTW	Two MTWs	Homeland Defense

A template would be prepared for each specific cross-cutting issue. There would be additional charts on the substance of the issue at any review, but the template would be a common entry point into any discussion of a specific issue. Additional graphic elements are a representation of the relevant timeframe—near-term (2001), mid-term (2007), and long-term (2020)—and a judgment on several factors relating to analytic underpinnings of the issue review, including the availability of data, relevance of existing analysis, and adequacy of existing models. As previously noted, the panels should not be thinking in terms of answers but rather considering alternatives or possible solutions. As part of the review, a plan of action and milestones should be presented.

Moving the Joint Staff QDR organization into effectively addressing the most important issues will require continual monitoring, but we believe the items raised in this section will provide some direction. In addition, we believe it is helpful to "salt the ground" with illustrations of frameworks that might more clearly present issues and associated risks to the senior leadership. The next section will present some preliminary results in this area.

ADDRESSING ISSUES AND RISK IN A COMMON FRAMEWORK

The QDR legislation is quite clear that risk assessment is central to the review. How risk is defined is left up to the Secretary of Defense. But, since the language of the legislation refers to both "military risk" and "missions called for under the national defense strategy," there is nothing to keep the Chairman from defining risk from his perspective and offering his definitions to the new Secretary of Defense. As previously discussed, waiting for the new administration to provide definitions should not be an option, as it would keep assessments of alternatives from starting.

The Joint Strategy Review, although not a formal part of the QDR preparation phase, provides options and defines missions that can be used to develop a risk-assessment framework. Just how risk will be defined will be worked out during the preparation phase, in which a review of the treatment of risk in other forums can be considered.[9]

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[9] See Bernstein, *Against All Gods: The Remarkable Story of Risk*; Kirkwood, *Strategic Decision Making*; and Stacy, *Managing the Unknowable*.

Characteristics of a Useful Framework

- **Graphic representations have more impact than tables; supporting text can be developed as needed**
- **Actual missions and tasks are too numerous for useful graphic displays**
- **Aggregations must be logical and easily understood**
- **Initial objective should be to associate missions, forces, and risks in a hierarchical structure**
  - **Risk or forces required to support a broad mission category could be decomposed into major components with a more specific description of risks and forces**

Several characteristics should be considered in building a risk-assessment framework. Relatively simple graphic representations can incorporate many elements that are difficult to extract from tables.[10] As previously shown, the strategy can be represented by a spectrum of missions of increasing intensity. Each component of the graphic can be described in as much detail as necessary in supporting text.

By building graphic representations, panels are forced to aggregate their ideas, which in turn helps the leadership to think about better ways to describe the hundreds of specific missions and tasks required to describe the full range of current and future operational requirements. However, the aggregations should not be arbitrary; they should be based on an underlying logic that can be easily understood.

Our previous work in objective-based planning[11] demonstrated a hierarchical structure of missions, objectives, and tasks that was translated into a database with nested assessments of current and future

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[10] See Tufte, *The Visual Display of Quantitative Information*, p. 13, for a discussion of excellence in statistical graphics.

[11] See Pirnie and Gardiner, *An Objectives-Based Approach to Military Campaign Analysis*.

capabilities to conduct operational missions.[12] Earlier databases linked programs and resources to the tasks that they supported. Risk could also be disaggregated to show which missions are more at risk in a particular time period for a specific strategy or allocation of resources.

The following slides will systematically build a graphic representation of risk tied to operational missions. The framework is intended to be illustrative of what can be done and to serve as a starting point for the QDR Integration Group and individual panels in building a taxonomy and framework with which they are comfortable.

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[12] See, Leslie Lewis, et al., *The United States Special Operations Command Resource Management Process;* and John Y. Schrader, et al., *USFK Strategy-to-Task Resource Management.*

An Initial Set of Mission Categories

- Engagement: day to day missions performed to "shape" the environment
  - Forward-stationed forces in Europe and Asia
  - Routine deployments of forward-presence forces worldwide
  - Training exercises with allies and friends
- Routine Smaller-Scale Contingencies
  - Humanitarian and disaster-response missions
  - Noncombatant evacuation operations and shows of force
- Significant Smaller-Scale Contingencies
  - Long-duration peacekeeping and peace-enforcement operations (SFOR, Kosovo, Northern Watch, Southern Watch)
- First Major Theater War
  - Possibly split into cases to consider significant asymmetric responses
- Two Near-simultaneous MTWs
- Homeland Defense
  - Nuclear Deterrence
  - Ballistic Missile Defense
  - Civil Support to prepare for WMD terrorism

> All ongoing and contingency operations should fall in only one grouping
> Groups are illustrative (should be refined by Strategy Panel)

The first step in building a risk-assessment framework is to capture the spectrum of missions that military forces are asked to support. Using the National Military Strategy and the Report of the Secretary of Defense to the President and the Congress as a starting point, we constructed six major mission categories that may be useful in relating QDR issues to strategic and military risk. The strategy panel may want to restructure this list, but the result should still be a hierarchical list with six to eight major groupings. All the elements of our list should be immediately familiar. However, the distinction between the first MTW and two near-simultaneous MTWs is our invention to capture elements of several recurring cross-cutting issues. Similarly, our inclusion of nuclear deterrence in the homeland defense mission is not the standard grouping, but we believe it more accurately captures the meaning of "homeland defense."[13] The mission clearly does not fit in any of the other categories.

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[13] Nuclear deterrence also assists our allies. Similarly, national missile defense capabilities could be extended to protect friends and allies. This structure is intended to provide a simple picture that captures, in useful groupings, the most important elements of our capabilities.

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Baseline Spectrum of Missions

Engagement	Routine SSCs	Significant SSCs	First MTW	Two MTWs	Homeland Defense

Boundaries are not precise, but
  rules should be established for consistency
Forces assigned to missions will change
  based on time frame and level of intensity

The highest level of our mission hierarchy forms the basis for a spectrum of military missions. We have made a distinction between routine SSCs, such as humanitarian relief operations and noncombatant evacuation operations (NEOs), and significant SSCs, such as the peacekeeping operations in Iraq and Bosnia, which are much less predictable in scope and duration. Obviously, the boundaries can be blurred and an operation may progress from one category to another. Again, these categories are intended to serve as a starting point for the Joint Staff and should be viewed as dynamic throughout the QDR.

The next step in our risk-assessment taxonomy is the association of forces with missions. Problems can arise if the available forces are unprepared or insufficient in number. Our assessments will consider three categories of forces. Active and Reserve operational forces are those forces routinely assigned to prepare to conduct operational missions. These are the forces generally referred to as the "tooth," although again definitions are not consistent. Generating forces are the third category and consist of both active and reserve forces that perform the Title X functions of preparing forces. These are the "tail" forces; the category also includes civilians, but they are not the primary focus of this mission-oriented approach. Upon review by the relevant QDR panels or the oversight flag-officer groups, a different breakdown may be more useful. However, simplicity of presentation should remain an important objective.

We will eventually need to address the capabilities that these forces provide, but initially referring to the quantity of forces will be adequate. From associating forces with current missions, an understanding of current readiness problems may develop. In any case, we can build an understanding of force commitments. The Commanders in Chief (CINCs) demand sets of capabilities to accomplish missions, but they are assigned specific forces. If the mission is not accomplished, the reason probably lies with capabilities of the force. In common usage, force is a surrogate for "the capabilities inherent in the force."

Graphic Representation of Forces
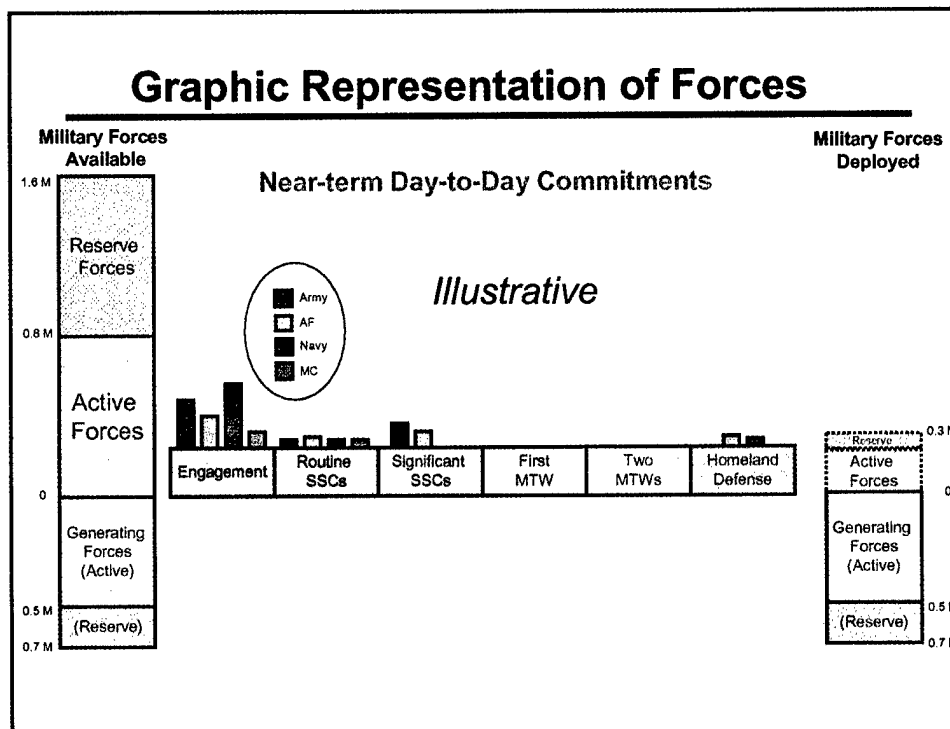
The slide shows how forces could be used in conjunction with the mission spectrum to show both the starting inventory of forces by major category on the left and the total allocation of forces in a particular timeframe (near-term) for a specific set of missions (day-to-day commitments) on the right. For each mission category, the number of military personnel (by service) are shown, and collectively they should add up to the totals on the left. More than one of these charts will be required to capture different viewpoints on force requirements, but there is information in each viewpoint. Exactly how many and which ones to use will evolve as the participants become familiar with the methodology.

Graphic Representation of Forces
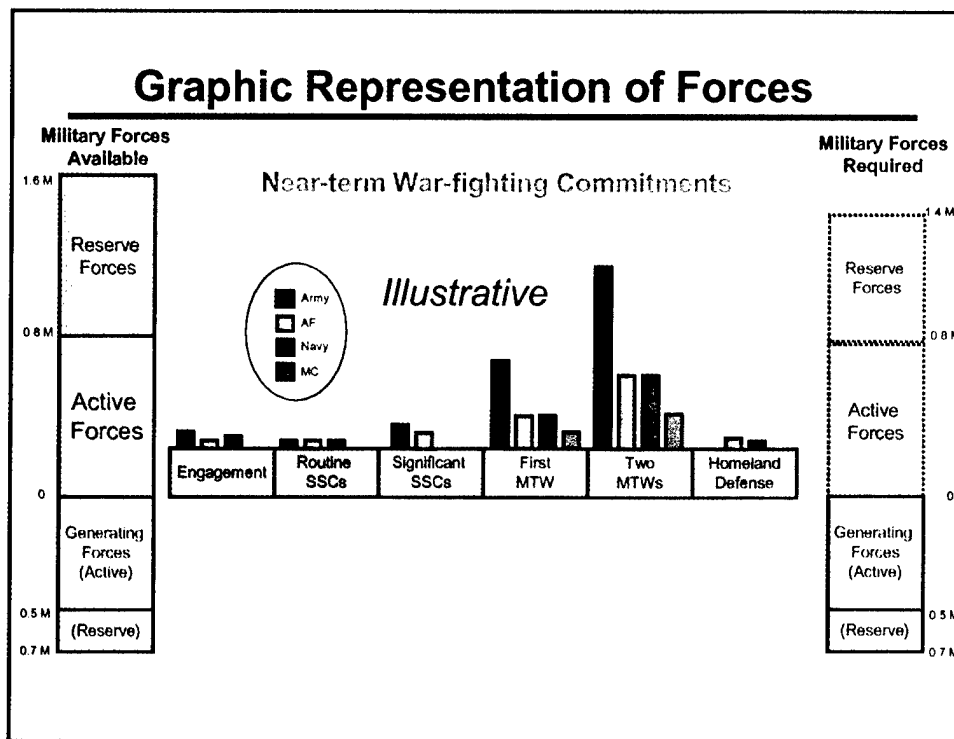
A second set of requirements for each time frame must also be considered. Here we use the term "war-fighting commitments" to illustrate the demands of a representative set of war plans. Where engagement forces are "dual-tasked" for warfighting missions, the adjustments to allocated forces are shown in the mission-specific bars. There are two ways that this type of chart could be used. First, it could be a demand chart, and if forces demanded by a particular strategy alternative exceeded those available the shortfall could be shown with benchmarks from the available forces on the left. Alternatively, it could be used to show the maximum forces that could be allocated, and the individual bars could be benchmarked against the requirements of the CINCs for those missions.

The display is intended to show both the requirements for the first of two MTWs, which may be satisfied at low risk, and the requirements for two near-simultaneous MTWs, where risk might be much higher.
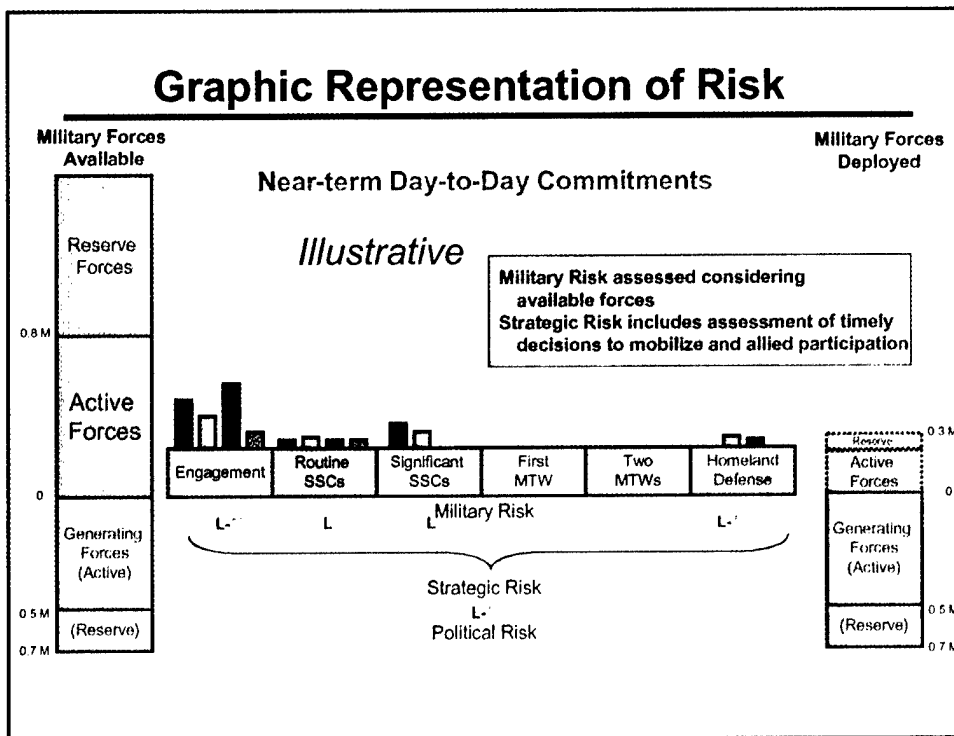
An Initial Approach to Risk

- **From the perspective of the CINCs and the CJCS, risk is hierarchical—building from assessments for individual operations in support of broad mission categories**
- **Military Risk: an assessment of the risk to successful completion of assigned missions given available forces**
  - **Readiness risk is a subset of military risk that contributes to a commander's assessment of ability to perform assigned missions**
- **Strategic Risk: an assessment of the operational risk of achieving the strategic objectives of military forces (Shape, Respond, Prepare)**
- **Political Risk: an assessment of the overall risk of achieving the National Military Strategy taking into account resources, technology, and the geopolitical environment**

The final step is to propose an initial definition of risk for QDR preparation activities. We believe that our "strawman approach" makes an important statement about military risk. Readiness is not an end in itself. Instead, it is only one of several components of military risk.[14] Planned operations will almost certainly fail if forces are not ready, but they can also fail if ready forces have inadequate equipment to defeat an enemy or if the forces are insufficient in number. In our hierarchical approach, it will be necessary to further develop the taxonomy to include an appropriate set of components of military risk. These might include readiness, sufficiency, availability of forces, effect on other missions, resource posture, and likelihood of demand.

Strategic and political risk are based in part on military risk assessments. The components of these risk categories are more problematic and will need to be developed in subsequent research.

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[14] Readiness can also be considered an element of risk at higher levels. It may be helpful to think of "Big R" readiness as the result of all military program decisions and "Small r" readiness as the input to computing capabilities for a specific military mission. In this sense R readiness would be at risk if modernization is underfunded and the resulting long-term capabilities are at risk; r readiness is represented by the risk resulting from a reduced MTW capability for Army divisions with units deployed to peacekeeping operations.

Graphic Representation of Risk

Military Forces Available

Military Forces Deployed

Near-term Day-to-Day Commitments

Illustrative

Military Risk assessed considering available forces
Strategic Risk includes assessment of timely decisions to mobilize and allied participation

Reserve Forces

Active Forces

0.8 M

Generating Forces (Active)

0

(Reserve)

0.5 M

0.7 M

| Engagement | Routine SSCs | Significant SSCs | First MTW | Two MTWs | Homeland Defense |

Reserve

Active Forces

Generating Forces (Active)

(Reserve)

0.3 M

0

0.5 M

0.7 M

L- L L Military Risk L-'

Strategic Risk
L-'
Political Risk

Our preliminary graphic representation is completed by adding the three risk categories to our representations of strategy and forces. For each mission, a military risk assessment is added below the spectrum bar. This presentation allows risk assessments from more than one viewpoint. Risk for supporting significant SSCs may be low-moderate, as shown for near-term day-to-day scenarios, but higher in the event of an MTW.

Strategic risk is shown to be based on the individual elements of military risk, but just how the risk elements are combined will require further analysis. Previous research has shown that weighted averages are not useful, because a strategy could fail if one key element were unacceptable. A more useful approach would be to have subject-matter experts review the underlying elements and assign a preliminary assessment. The preliminary assessments could then be used to initiate discussions with the senior leadership. Ultimately, the judgments would be those of the Chairman and could be shared with appropriate audiences, both up and down the chain of command.

Comprehensive Risk Perspective

	2000	2007	2020
Day-to-Day Operations	**Strategic Risk** Principal Issues: PERSTEMPO LD/HD Units	**Strategic Risk** Principal Issues: PERSTEMPO LD/HD Units	**Strategic Risk** Principal Issues: Underfunded Modernization Lack of new concepts
Warfighting Rqmts	**Strategic Risk** Principal Issues: Lack of Army CSS	**Strategic Risk** Principal Issues: Countering WMD	**Strategic Risk** Principal Issues: Underfunded Modernization Lack of new concepts

This slide provides an example of a brief, comprehensive assessment of strategic risk capturing the two perspectives on requirements (day-to-day operations and warfighting requirements) and the three relevant time periods. It adds information from the assessment process of the principal issues raised in arriving at risk values. Although this table is illustrative, we have tried to identify issues and risk values discussed in recent readiness reports to Congress. Personnel tempo (PERSTEMPO) is clearly a near- to mid-term issue, but it may also have long-term implications. Modernization primarily affects capabilities in the long term. Resolving the tension between requirements in different time periods is difficult, but we believe this framework will help in focusing the debate.

Role of Framework in QDR Integration

- **Framework links strategy, forces, and risk in a specific time with cumulative demand for capabilities**
  - Forces data for day-to-day demands should be readily available
  - Demands for warfighting forces available for near-term and end of POM but problematic for transformation options
  - Initial risk assessments can be based on JMRR
- **Framework provides a basis for hierarchical disaggregation**
  - Components of demand for engaged forces
  - Nature of risk to two MTW mission
- **Dynamic Commitment data can be displayed using framework**
  - Snapshot for each move would reflect demands and highlight risks
- **Cross-cutting issues can be linked to risk assessments**
  - "What is the most significant problem?"
  - "What analysis is anticipated to provide insights on alternatives?"

We have constructed a framework to link strategy, forces, and risk for a specific time frame and a specified set of missions. The data should be available to begin to experiment with the utility of the construct. As discussed in developing the pieces, this should be a tool for QDR integration that will provide focus for the QDR panels and a mechanism to engage the senior leadership in discussion on the substance of issues. It should be viewed as dynamic, but changes should be managed by the Integration Group.

Central to this approach is a hierarchical structure that supports disaggregation to identify critical elements that contribute to a military judgment. In some cases, analysis using models or war games may be appropriate to resolve ambiguities. In other cases, new analytic tools may be required. This was the case in the last QDR, when Dynamic Commitment was created to build an understanding of the demands of current operations.

The QDR 2001 version, Dynamic Commitment Beyond 2000 (DCB2K) will again investigate some of the demands of the Commanders in Chief. We believe this framework could be used to summarize the results of each DCB2K move. It would show where forces were applied and identify risks from lack of sufficient capabilities. It would also show the extent of unused forces.

From the standpoint of QDR integration, the framework would facilitate sorting the myriad issues generated by the panels into hierarchical sets that link the consequences of deficiencies with their potential effect on performing the missions of the Commanders in Chief.

Summary

- QDR 1997 problems and issues are far from being resolved
  - No clear guidance
  - Service resistance in addressing tough problems
  - Proliferation of committees
  - Risk of wasting effort on less important issues
  - Effects of resources not understood
- Understanding the problem can contribute to a solution, but strong leadership is necessary
  - Use GOSC to monitor and redirect staff activity
    - Stop unwarranted or too-detailed analysis of less important issues before it goes too far
  - Develop integrated approach with small subgroups then get buy-in from larger groups
  - Provide templates to integrate outputs of panels and to focus oversight activities
  - Produce an analytic plan linking activities with issues
- Establish early and comfortable working relationships with OSD

CONCLUSIONS

In summary, the problems and issues that this team tracked during QDR 1997 are far from being resolved. Since the new administration defense team is months away from being chosen, there is no clear guidance on what will be demanded in the spring. The services remain very skeptical of the Joint Staff dealing with tough issues that could redirect their own programmatic decisions. The organization and process have been developed, but the creation of subgroups has already begun. The bottom-up generation of issues by the panels could lead to wasted efforts, but the GOSC is reviewing issues and there is promise of improvement in this area. The most glaring problem, however, is the lack of a comprehensive approach to treating resources and understanding the effects of resources of strategy and transformation alternatives.

The glass is certainly at least half full. The panels have reviewed and discussed many of the lessons learned from the last QDR. The GOSC is potentially much more effective than the integration mechanisms of the last QDR. The templates we have suggested in this analysis should assist the Integration Group in keeping the panels on track and keeping the senior leadership informed. We do believe that, in addition to milestone charts, a comprehensive analytic plan should link the emerging issues with supporting analysis activities.

A larger issue that remains is the relationship between the Joint Staff and the OSD. The political appointees will be leaving but the professional staff will remain. It is essential that good working relationships be established now with a clear understanding of the different responsibilities and different capabilities of the two organizations. Good analysis and thorough debate within the Joint Staff QDR organization and in senior officer reviews will make the military advice provided by the Chairman an important determinant in the outcome of the QDR.

There is still time to prepare for the next QDR, but the time must be used effectively. Identifying an appropriate set of mega-issues (with an appropriate set of supporting specific issues) and initiating studies and analysis on the most important ones will ensure that the Joint Staff has prepared the senior leadership to execute its responsibilities in assessing risks and providing military advice to the Secretary of Defense. Thorough preparation, efficiently managed, will establish credibility for the Joint Staff with the OSD staff that remains after the elections, as well as with the transition team and the new political appointees. These preparation activities will also facilitate integration within the Joint Staff and with the Commanders in Chief.

APPENDIX

SPECIFIC ISSUES

These slides list a starting set of specific cross-cutting issues that are tied to sets of alternatives that will need to be addressed in the next QDR.

Specific Issues
(1 of 6)

MILITARY STRATEGY ALTERNATIVES

1 What if one MTW goes away or there is a change in MTWs?
2 What are the alternatives to two MTWs plus overseas presence?
3 What are the priorities among shaping, SSCs, and later phases of MTWs?
4 How do we balance the need to maintain U.S. conventional superiority while meeting asymmetrical threats (part of MTW or separate)?
5 How do we balance the need to shape and respond against the need to prepare for a future that may include a regional great power or near peer?
6 Is it worth devoting a portion of the force structure to transformation?
7 Can some modernization be deferred because near-term threats are manageable?
8 What are the likely wild-card scenarios and what are their implications?

FORCE STRUCTURE ALTERNATIVES

9 What are alternative operational concepts to accomplish anticipated missions?
10 What force composition and mix should get us to 2010?
11 What new, innovative concepts and technologies will affect force structure?
12 Where is the room for change in force structure?
13 What force experimentation is mature enough to apply across the force?
14 What new ideas can we implement with the current force?
15 What is the implication of new capabilities for the force structure the United States should maintain?
16 What tradeoffs and creative approaches should be made while staying within the shaping constraints?
17 What are the force structure implications of high-cost platforms/smaller numbers in warfighting and in presence?

Specific Issues

OVERSEAS PRESENCE ALTERNATIVES

18 What developments in Asia and Europe should we anticipate and plan for?

SSC SUPPORT ALTERNATIVES

19 What are the appropriate SSC scenarios?

20 What are the high demand, low density (HD/LD) unit and individual issues?

21 What is the history and experience of forces (units and people) and equipment required for SSCs?

22 What are the implications for broader force structure of SSC force use (e.g., active component–reserve component mix)?

23 What are the implications of broader force use for combat support and combat service support?

24 Should forces be held in reserve for use by regional CINCs in SSCs?

25 What is the art of the possible on contract support for combat support and combat service support in benign environments (also host nation and allied support)?

Specific Issues

ASYMMETRIC THREAT ALTERNATIVES

26 What are the principal asymmetric threats?

27 Where are U.S. vulnerabilities to asymmetric threats?

28 What are the effects of an adversary taking advantage of a U.S. vulnerability to asymmetric threats?

29 What can the United States do to deter, preempt, and mitigate the application of asymmetric actions?

30 What are the planning challenges associated with asymmetric threats (e.g., biological weapons and information operations)?

31 What kinds of asymmetric consequences can have a decisive impact on the United States (e.g., failure of coalition)?

32 What asymmetric warfare tools apply to information operations?

33 What approaches to asymmetric threats can enhance sanctions and enforcement?

HOMELAND DEFENSE ALTERNATIVES

34 What is the full dimension of the homeland defense problem?

35 Who is in charge of preparing for homeland defense threats?

36 What are the command-and-control issues in responding to homeland defense threats?

37 What are the training and equipment implications of homeland defense threats?

38 What are the legal implications of homeland defense?

39 What is the requirement for cruise missile defense?

Specific Issues
(4 of 6)

NEW OPERATIONAL AND ORGANIZATIONAL ALTERNATIVES

40 What are the critical operational challenges to guide transformation?

41 What concept development should be performed to define new operational concepts?

42 What experimentation should be performed to evaluate new operational concepts?

43 What are the new programs that will be announced in the next QDR report that demonstrate a transformation strategy?

44 Given the results of our experimentation process, what new programs will be ready to be implemented?

45 What is the appropriate strategy for working with allies and coalition partners?

TEMPO MANAGEMENT ALTERNATIVES

46 What adjustments to force structure will be required to respond to tempo problems?

47 What additional tempo management initiatives will be required (e.g., service differences)?

48 Which force elements are experiencing tempo problems?

49 What are the tradeoffs to better manage tempo on critical assets?

50 What are the alternative means to accomplish the missions, rather than use stressed units?

Specific Issues
(5 of 6)

READINESS RESOURCING ALTERNATIVES

51 What are the right metrics to use to measure readiness?

52 What is the right balance between the better business practices and logistics, depots, and warfighter support (business efficiency versus military efficiency; lower costs versus overwhelming superiority)?

53 How do we build life-cycle ownership costs into weapons procurement?

54 What tools should be developed to predict near- and long-term readiness issues?

55 What is the best means of tracking funding increases to readiness problems?

INVESTMENT BALANCE ALTERNATIVES

56 What is the long-term cost of replacing the current force with the modernized version?

57 What opportunities exist to perform less than one-for-one replacement of legacy systems?

58 What approach allows for more efficient acquisition (delay, speed up, or kill off)?

59 What are the most promising transformation strategies that warrant additional funding?

60 What areas of recapitalization, transformation, and force structure need to be reevaluated?

61 What are the alternative investment strategies (keyed to force structure alternatives)?

62 What is the effect of modernized or recapitalized forces on various warfighting scenarios?

Specific Issues

WEAPONS MIX ALTERNATIVES

63 Are we buying enough precision weapons?

64 What is the appropriate mix of platforms versus weapons, given existing service constraints?

65 How good a handle do we have on worldwide usable weapons stockpiles?

STRATEGIC FORCES AND POLICY ALTERNATIVES

66 What road map should be developed for offensive nuclear forces in the absence of START II ratification?

67 What road map should be developed for theater nuclear forces (e.g., tactical)?

INFRASTRUCTURE ALTERNATIVES

68 How do we adapt and modernize training and testing infrastructure to achieve greater jointness and interoperability?

69 How do we adapt and modernize training and testing infrastructure to take advantage of advances in distributed learning and embedded training?

70 How do we adapt and modernize training and testing infrastructure to accommodate technological change in operational forces (e.g., Army Force XII)?

71 How do we adapt and modernize training and testing infrastructure to ensure that advanced weapon systems can be tested and operated at full range/capability?

72 How do we reduce infrastructure requirements and save money while increasing readiness?

73 What are the alternatives to logistics, training, and laboratory structure?

74 What other opportunities are there in the information structure?

75 What opportunities are there for improving quality of life?

GLOSSARY

CINCs	Commanders in Chief
CJCS	Chairman of the Joint Chiefs of Staff
CS/CSS	Combat Support/Combat Service Support
DCB2K	Dynamic Commitment Beyond 2000
DPRK	Democratic People's Republic of Korea
FGCS	Force Generation, Capability, and Structure
FYDP	Future Years Defense Program
GOSC	General Officer Steering Committee
HD/LD	High Demand/Low Density
HR	Human Resources
IS	Information Superiority
JMRR	Joint Monthly Readiness Review
JROC	Joint Requirements Oversight Council
JSR	Joint Strategy Review
JSTARS	Joint Strategic Targeting and Reconnaissance System
MRCs	Major Regional Contingencies
MRS-05	Mobility Requirements Study '05
MTW	Major Theater War
NEO	Noncombatant Evacuation Operation
OBPRM	Objectives-Based Planning and Resource Management
OOTW	Operations Other Than War
OSD	Office of the Secretary of Defense
PERSTEMPO	Personnel Tempo

POM	Program Objective Memorandum
PPBS	Planning, Programming, and Budgeting System
QDR	Quadrennial Defense Review
SAGD	Studies, Analysis, and Gaming Division
SAMD	Studies and Analysis Management Division
SecDef	Secretary of Defense
SMI	Sustainment, Mobility, and Infrastructure
SRA	Strategy and Risk Assessment
SSCs	Smaller-Scale Contingencies
TIJE	Transformation, Innovation, and Joint Experimentation
WMD	Weapons of Mass Destruction

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